Confirming "truth": More Evidence of a Successful Tobacco Countermarketing Campaign in Florida

Jeff Niederdeppe, MA, Matthew C. Farrelly, PhD, and M. Lyndon Haviland, DrPH

This study provides additional evidence that Florida's "truth" tobacco countermarketing campaign was successful in reducing smoking among Florida teens. Smoking rates were substantially lower among Florida teens between fall 2001 and spring 2002, whereas previous studies found that smoking rates were comparable before the launch of "truth." Florida teens had higher levels of "truth" campaign awareness and were more likely to agree with campaign-targeted beliefs; 2 of these beliefs were the only items associated with current smoking.

The Florida Tobacco Control Program began in April 1998 with the launch of the "truth" countermarketing campaign, which was funded by Florida's 1997 settlement with the tobacco industry. "truth" messages have described the tobacco industry's purposeful attempts to market a harmful product to teens and its denial of cigarettes' addictive and deadly effects. "truth" also has sought to empower teens by urging them to join the statewide youth antitobacco group, Students Working Against Tobacco, to disseminate campaign messages interpersonally, and to rally support for tobacco control policy. Florida youth smoking rates declined rapidly,[1] and evidence suggests that the "truth" campaign contributed to these reductions in the first year of the program.[2,3] However, the program has faced substantial budget cuts in recent years.[4] In this report, we provide additional evidence of the success of Florida's tobacco countermarketing campaign more than 2 years into the program using data from the Legacy Media Tracking Survey (LMTS), a national survey of teens that includes a large sample from Florida.

Published reports indicate that Florida teens and their national counterparts (excluding states with comprehensive programs) had comparable industry beliefs and smoking behavior before the launch of the Florida Tobacco Control Program (42.1% of Florida teens were lifetime smokers and 13.8% were current smokers; nationally, the figures were 40.7% and 12.6%, respectively).[2] The national "truth" campaign, modeled closely after Florida's "truth" campaign and featuring a similar counterindustry message strategy, was debuted in early 2000 and was responsible for notable changes in beliefs about the tobacco industry and smoking intentions. However, the magnitude of effects was consistent across states.[5] Thus, any differences observed in Florida in late 2000 and early 2001 are probably attributable to the efforts of the state campaign.

A possible campaign effect can be inferred if the following are found to exist: (1) campaign awareness was higher among Florida youths, (2) Florida youths held stronger campaign-targeted attitudes and beliefs, (3) nontargeted attitudes and beliefs were comparable among Florida teens and among teens nationwide, and (4) campaign-targeted attitudes and beliefs were strongly associated with smoking behavior among Florida teens.[6]

METHODS

The LMTS, a national random-digit-dialed telephone survey of teens and young adults sampled from US households, was designed to gauge the effectiveness of the American Legacy Foundation's national "truth" campaign (see Farrelly et al.[5] for a description of the methodology). In addition, representative samples were drawn from states with existing countermarketing campaigns (including Florida) to examine potential synergies with the national "truth" campaign. The number of surveys conducted between fall 2000 and spring 2001 permit comparisons between Florida teens aged 12 to 17 years (n=1097) and teens from states without established comprehensive tobacco control programs (n=6381; excludes respondents from Arizona, California, Massachusetts, Mississippi, and Oregon). Florida and national samples were comparable in the distribution of age and gender, although the Florida sample contained a higher proportion of African Americans and Hispanics. All analyses were weighted to adjust for age and oversampling by racial/ethnic group and residence in countermarketing campaign states. Standard error calculations were adjusted for racial/ethnic group and geographic oversampling.

The LMTS measured current smoking, lifetime smoking, smoking intentions, and awareness of the "truth" campaign, antismoking groups, and school-based tobacco education. In addition, the LMTS asked youths how strongly they agreed or disagreed (on a 5-point scale) with a series of belief statements about cigarette companies and the social and physical effects of smoking. Belief items were recoded 1 ("agree" or "strongly agree") or 0 (all other responses) for logistic regression analysis (reverse coded where noted).

We began by comparing Florida and national teens on smoking intentions and behavior and contrast levels of program awareness. Next, we compared levels of agreement with 4 beliefs about cigarette companies and 8 beliefs about the social and physical effects of smoking. We tested the independent associations between specific beliefs and current smoking, controlling for demographics and other known predictors of smoking, using logistic regression.

RESULTS

Florida teens were less likely than their national counterparts to have smoked in the past 30 days, to have ever tried smoking, or to indicate that they could not rule out the possibility of smoking in the future (among never smokers) (Table 1). Florida teens also had substantially higher levels of "truth" and antitobacco group awareness than their national counterparts. Florida teens reported less favorable beliefs than youths nationwide about the tobacco industry but similar beliefs about the social and physical effects of smoking. Only 2 belief items, those central to "truth" campaign messages, were significant predictors of current smoking among Florida teens (Table 2).

DISCUSSION

Results provide additional evidence that the "truth" campaign and Students Working Against Tobacco were successful in changing smoking behavior among Florida teens. Smoking intentions and behavior were substantially lower among Florida teens, while levels of "truth" and antitobacco group awareness were much higher than levels observed among their national counterparts. Florida teens were more likely than teens nationwide to agree with specific beliefs about the tobacco industry, and 2 of these beliefs were the only items associated with current smoking. The fact that we observed no differences in beliefs about the social and physical effects of smoking suggests a possible causal relationship.

It is impossible to determine whether changes in beliefs preceded changes in smoking behavior owing to the cross-sectional nature of this study, and the magnitude of differences in industry beliefs between Florida teens and teens nationwide was relatively small compared with the magnitude of differences in current smoking. However, a recent longitudinal study found that Florida teens with high levels of counterindustry attitudes were 4 times less likely to initiate smoking, and more than 13 times less likely to become established smokers, than were teens with low levels of counterindustry attitudes.[7] In addition, the success of a Massachusetts antitobacco campaign in reducing the likelihood of smoking uptake by 50% among 12- to 13-year-olds also suggests that countermarketing campaigns can reduce youth smoking substantially.[8] These studies suggest that industry beliefs can precede changes in behavior, and they imply that the magnitude of differences in industry beliefs observed in the LMTS could lead to the observed differences in smoking behavior. ■

About the Authors

Jeff Niederdeppe and Matthew C. Farrelly are with RTI International, Research Triangle Park, NC. M. Lyndon Haviland is with the American Legacy Foundation, Washington, DC.

Requests for reprints should be sent to Jeff Niederdeppe, MA, RTI International, 3040 Cornwallis Rd, Research Triangle Park, NC 27612 (e-mail: jniederdeppe@rti.org).

This brief was accepted June 19, 2003.

Contributors

J. Niederdeppe helped direct analyses, conducted all analyses, and prepared the original brief. M.C. Farrelly designed the survey questionnaire and methodology, helped direct analyses, and participated in preparing

TABLE 1—Comparison of Smoking Behaviors, Intentions, Beliefs, and Program Awareness Among Florida Youths With Those Among Youths Nationwide

	Florida (n = 1097), %	National (n = 6381), %	χ^2_1 (*P*)
Smoking intentions and behavior			
Smoked in past 30 days	6.6**	14.0	11.3 (<.01)
Ever tried smoking	24.3**	33.5	8.7 (<.01)
Open to smoking in the future (among those who have never tried smoking)	13.8**	24.3	10.9 (<.01)
Awareness of "truth," school or community groups, and tobacco use prevention education[a]			
Unaided "truth" awareness	44.8**	20.1	81.5 (<.01)
Aided "truth" awareness	87.6**	66.6	56.9 (<.01)
Aided awareness of school or community antitobacco group	48.9**	34.0	22.7 (<.01)
Aided awareness of school-based tobacco use prevention education	65.8	65.6	0.0 (.96)
Beliefs about cigarette companies (agreement unless noted)			
Cigarette companies lie	87.3**	79.9	9.2 (<.01)
Cigarette companies try to get young people to start smoking	88.6**	80.8	8.9 (<.01)
Cigarette companies deny that cigarettes cause cancer and other harmful diseases	66.1**	54.1	13.8 (<.01)
Cigarette companies deny that cigarettes are addictive	68.1*	61.8	3.9 (.05)
Beliefs about the social effects of smoking (agreement unless noted)			
Smoking cigarettes makes people your age look cool or fit in (disagree)	88.8	91.7	2.2 (.13)
Nonsmokers don't like to date someone who smokes	64.0	65.1	0.1 (.71)
Smoking is a way to show others you're not afraid to take risks (disagree)	90.8	88.0	1.8 (.18)
Young people who smoke cigarettes have more friends (disagree)	87.6	90.2	1.4 (.23)
Beliefs about the physical effects of smoking (agreement unless noted)			
It is safe to smoke for only a year or 2, as long as you quit after that (disagree)	92.1	92.3	<0.1 (.90)
People who smoke regularly have a much harder time keeping up in sports	89.3	90.3	0.3 (.59)
Smoking cigarettes can help keep your weight down (disagree)	76.3	76.1	<0.1 (.97)
One out of 3 people who start smoking by age 18 will die because of smoking	78.4	76.6	0.4 (.51)

[a]Aided awareness measures provided respondents with a cue (e.g., "Have you heard of the "truth" campaign?"), whereas unaided awareness measures asked respondents to provide the information without prompting ("Are you aware of any antismoking or antitobacco campaigns that are now taking place? What is the theme or slogan of this campaign?").
*P < .05; **P < .01.

TABLE 2—Relationship Between Beliefs and Smoking Behavior Among Florida Teens

Logistic Regression Model Results (n = 1097)[a]	Smoked in Past 30 Days, OR (95% CI)
Beliefs about cigarette companies (agreement unless noted)	
Cigarette companies lie	0.20* (0.07, 0.56)
Cigarette companies try to get young people to start smoking	0.24* (0.08, 0.71)
Cigarette companies deny that cigarettes are addictive	0.78 (0.27, 2.23)
Cigarette companies deny that cigarettes cause cancer and other harmful diseases	0.87 (0.33, 2.29)
Beliefs about the social effects of smoking (agreement unless noted)	
Smoking cigarettes makes people your age look cool or fit in (disagree)	0.73 (0.22, 2.41)
Nonsmokers don't like to date someone who smokes	0.96 (0.40, 2.29)
Smoking is a way to show others you're not afraid to take risks (disagree)	0.33 (0.10, 1.12)
Young people who smoke cigarettes have more friends (disagree)	0.71 (0.18, 2.90)
Beliefs about the physical effects of smoking (agreement unless noted)	
It is safe to smoke for only a year or 2, as long as you quit after that (disagree)	0.41 (0.12, 1.32)
People who smoke regularly have a much harder time keeping up in sports	0.49 (0.15, 1.64)
Smoking cigarettes can help keep your weight down (disagree)	0.40 (0.14, 1.16)
One out of 3 people who start smoking by age 18 will die because of smoking	0.54 (0.21, 1.41)

Note. OR = odds ratio; CI = confidence interval. Each model includes controls for age, gender, race/ethnicity, number of hours spent watching television per day, presence of a smoker in the household, number of parents in the home, existence of rules about smoking in the home, employment status, and weekly income (includes allowance and wages). Unless noted in the table, belief items were coded 0 = neutral or disagree, 1 = agree. Cases with missing data on any variable were excluded from the analysis.
[a]Separate models are estimated for each belief item.
*OR significantly different from 1 ($P < .05$).

the original brief. M.L. Haviland participated in preparing the final brief.

Acknowledgments

This research was supported by the American Legacy Foundation.

We thank Terry Pechacek and Jeffrey McKenna for inspiring this analysis and David Sly for his contributions to the design of the survey questionnaire and methodology. We are also grateful to Don Akin for sample design and variance estimation and to Susan Murchie for editorial review.

Human Participant Protection

All questionnaires and consent forms were reviewed and approved by RTI International's institutional review board (MPA M-1496).

References

1. Bauer UE, Johnson TM, Hopkins RS, Brooks RG. Changes in youth cigarette use and intentions following implementation of a tobacco control program: findings from the Florida youth tobacco survey, 1998–2000. *JAMA.* 2000;284:723–728.

2. Sly DF, Heald GR, Ray S. The Florida "truth" anti-tobacco media evaluation: design, first year results, and implications for planning future state media evaluations. *Tob Control.* 2001;10:9–15.

3. Sly DF, Hopkins RS, Trapido E, Ray S. Influence of a counteradvertising media campaign on initiation of smoking: the Florida "truth" campaign. *Am J Public Health.* 2001;91:233–238.

4. Givel MS, Glantz SA. Failure to defend a successful state tobacco control program: policy lessons from Florida. *Am J Public Health.* 2000;90:762–767.

5. Farrelly MC, Healton CH, Davis KC, Messeri P, Hersey JC, Haviland ML. Getting to the truth: evaluating national tobacco countermarketing campaigns. *Am J Public Health.* 2002;92:901–907.

6. Hornik RC, ed. *Public Health Communication: Evidence for Behavior Change.* Mahwah, NJ: Lawrence Erlbaum; 2002.

7. Sly DF, Trapido E, Ray S. Evidence of the dose effects of an antitobacco counteradvertising campaign. *Prev Med.* 2002;35:511–518.

8. Siegel M, Biener L. The impact of an antismoking media campaign on progression to established smoking: results of a longitudinal youth study. *Am J Public Health.* 2000;90:380–386.